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01134641.8 2001年11月8日(08.11.2001) CN

(71)(72) 发明人/申请人: 邹德骏(ZOU, Dejun) [CN/CN];
中国广东省深圳市福田区梅林一村29栋18C,
Guangdong 518049 (CN).

(74) 代理人: 中科专利商标代理有限责任公司(CHINA SCIENCE PATENT & TRADEMARK AGENT LTD); 中国北京市海淀区海淀路80号中科大厦16层, Beijing 100080 (CN).

(81) 指定国(国家): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

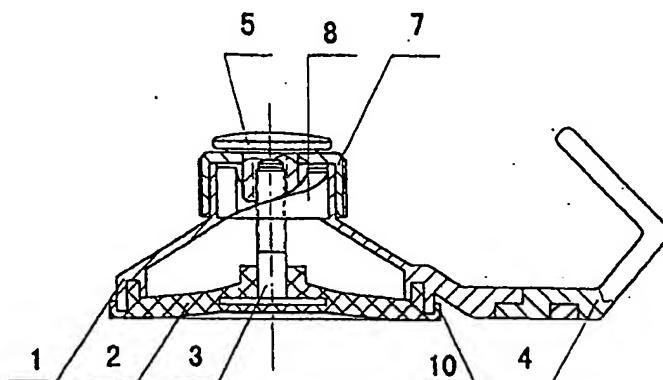
(84) 指定国(地区): ARIPO专利(GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), 欧亚专利(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), 欧洲专利(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI专利(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

本国际公布:
— 包括国际检索报告。

所引用双字母代码和其它缩写符号, 请参考刊登在每期 PCT公报期刊起始的“代码及缩写符号简要说明”。

(54) Title: A RAPID-ACTUATED SUCTION CUP DEVICE

(54) 发明名称: 快速联动吸盘座



WO 03/040577 A1

(57) Abstract: A rapid-actuated suction cup device is disclosed, which comprises a plastic suction cup with a pulling bar, a cover with a hanger and an adjustable screw cap engaged with the pulling bar. A linkage consisting of a spiral-guiding ring and a spiral-guiding cap is disposed on the top of the cover. Said spiral guiding cap has a central hole through which the pulling bar extends. Said spiral-guiding ring is fixed on the central top of cover. Said spiral-guiding cap is rotationally supported on the spiral-guiding ring. There is a gap between the screw cap and the spiral-guiding cap, which is substantially equal to the height of the plastic suction cup. Because of the linkage instead of the screw engagement of the pulling bar and the screw cap, the suction cup device can be mounted conveniently and rapidly on the smooth wall, and unharmoniously to wall.

[见续页]

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN02/00037

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷ F16B47/00; A47G29/087; A47J45/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷ F16B47/00; A47G29/087; A47J45/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Chinese Inventions 1985—2002; Chinese Utility Models 1985—2002

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI EPODOC PAJ CNPAT

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP, A, 915263 (CALLIGARO, GIUSEPPE) 12 May 1999 (12. 05. 99) See the whole document	1—3
X	DE, A, 2044859 (JETASH AG, CHUR) 01 April 1971 (01. 04. 71) See the whole document	1—3
X	US, A, 3747170 (KIEVES) 24 July 1973 (24. 07. 73) See the whole document	1—3

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim (S) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
06 August 2002 (06. 08. 02)

Date of mailing of the international search report

15 AUG 2002

Name and mailing address of the ISA/CN
6 Xitucheng Rd., Jimen Bridge, Haidian District,
100088 Beijing, China
Facsimile No. 86-10-62019451

Authorized officer

Cui Zheng

Telephone No. 86-10-62093094



INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN02/00037

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
A	GB, A, 2330324 (MICHAEL RITSON et al) 21 April 1999 (21. 04. 99) See the whole document	1-3
A	US, A, 4133575 (MADER) 09 January 1979 (09. 01. 79) See the whole document	1-3
A	CN, C, 1038156 (ZOU, Dejun) 22 April 1998 (22. 04. 98) See the whole document	1-3
A	GB, A, 2275723 (KEW LIAN (PTE) LTD) 07 September 1994 (07. 09. 94) See the whole document	1-3

INTERNATIONAL SEARCH REPORT
 Information on patent family members

International application No.
 PCT/CN02/00037

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP-A-915263	12-05-99	IT-B-1295947	28-05-99
DE-A-2044859	01-04-71	BE-A-756501	01-03-71
		NL-A-7013578	25-03-71
US-A-3747170	24-07-73	None	
GB-A-2330324	21-04-99	None	
US-A-4133575	09-01-79	DE-A-2553486 FR-A-2332875 JP-A-52123024 CH-A-604038 GB-A-1554659 AT-A-879976 AT-B-362664 IT-B-1072105	16-06-77 24-06-77 15-10-77 31-08-78 24-10-79 15-10-80 10-06-81 10-04-85
CN-C-1038156	22-04-98	CN-A-1152678	25-06-97
GB-A-2275723	07-09-94	CN-U-2162554	20-04-94

国际检索报告

国申请号

PCT/CN02/00037

A. 主题的分类

IPC⁷ F16B47/00; A47G29/087; A47J45/02

按照国际专利分类表(IPC)或者同时按照国家分类和 IPC 两种分类

B. 检索领域

检索的最低限度文献(标明分类体系和分类号)

IPC⁷ F16B47/00; A47G29/087; A47J45/02

包含在检索领域中的除最低限度文献以外的检索文献

中国发明专利 1985—2002; 中国实用新型专利 1985—2002

在国际检索时查阅的电子数据库(数据库的名称和, 如果实际可行的, 使用的检索词)

WPI EPODOC PAJ CNPAT

C. 相关文件

类 型*	引用文件, 必要时, 指明相关段落	相关的权利要求编号
	EP, A, 915263 (CALLIGARO, GIUSEPPE) 12. 5 月 1999 (12. 05. 99)	
X	见全文	1—3
	DE, A, 2044859 (JETASH AG, CHUR) 01. 4 月 1971 (01. 04. 71)	
X	见全文	1—3
	US, A, 3747170 (KIEVES) 24. 7 月 1973 (24. 07. 73)	
X	见全文	1—3

 其余文件在 C 栏的续页中列出。 见同族专利附件。

* 引用文件的专用类型:

"A" 明确叙述了被认为不是特别相关的一般现有技术的文件

"E" 在国际申请日的当天或之后公布的在先的申请或专利

"L" 可能引起对优先权要求的怀疑的文件, 为确定另一篇引用文件的公布日而引用的或者因其他特殊理由而引用的文件

"O" 涉及口头公开、使用、展览或其他方式公开的文件

"P" 公布日先于国际申请日但迟于所要求的优先权日的文件

"T" 在申请日或优先权日之后公布的在后文件, 它与申请日相抵触, 但是引用它是为了理解构成发明基础的理论或原理

"X" 特别相关的文件, 仅仅考虑该文件, 权利要求所记载的发明就不能认为是新颖的或不能认为是有创造性

"Y" 特别相关的文件, 当该文件与另一篇或多篇以本发明结合并且这种结合对于本领域技术人员为显而易见时, 权利要求记载的发明不具有创造性

"%" 同族专利成员的文件

国际检索实际完成的日期

06. 8 月 2002 (06.08.02)

国际检索报告邮寄日期

15. 8 月 2002 (15.08.02)

国际检索单位名称和邮寄地址

ISA/CN
中国北京市海淀区西土城路 6 号(100088)

传真号: 86-10-62019451

受权官员

崔峰

电话号码: 86-10-62093094



C(续). 相关文件

类 型*	引用文件, 必要时, 指明相关段落	相关的权利要求书
A	GB, A, 2330324 (MICHAEL RITSON 等) 21. 4 月 1999 (21. 04. 99) 见全文	1-3
A	US, A, 4133575 (MADER) 09. 1 月 1979 (09. 01. 79) 见全文	1-3
A	CN, C, 1038156 (邹德骏) 22. 4 月 1998 (22. 04. 98) 见全文	1-3
A	GB, A, 2275723 (KEW LIAN (PTE) LTD) 07. 9 月 1994 (07. 09. 94) 见全文	1-3

国际检索报告
关于同族专利成员的情报

国际专利号

PCT/CN02/00037

检索报告中引用的专利文件	公布日期	同族专利成员	公布日期
EP-A-915263	12-05-99	IT-B-1295947	28-05-00
DE-A-2044859	01-04-71	BE-A-756501	01-03-71
		NL-A-7013578	25-03-71
US-A-3747170	24-07-73	无	
GB-A-2330324	21-04-99	无	
US-A-4133575	09-01-79	DE-A-2553486 FR-A-2332875 JP-A-52123024 CH-A-604038 GB-A-1554659 AT-A-879976 AT-B-362664 IT-B-1072105	16-06-77 24-06-77 15-10-77 31-08-78 24-10-79 15-10-80 10-06-81 10-04-85
CN-C-1038156	22-04-98	CN-A-1152678	25-06-97
GB-A-2275723	07-09-94	CN-U-2162554	20-04-94